

Claims:

1. A method for reducing toxicity selected from the group consisting of alopecia and bladder toxicity induced by the administration of cyclophosphamide comprising the steps of administering to an individual in need of treatment a therapeutically effective dose of cyclophosphamide and a selenium compound wherein the toxicity induced by cyclophosphamide is less than the toxicity induced in the absence of the selenium compound.
2. The method of claim 1, wherein the selenium compound is seleno-L-methionine.
3. The method of claim 1, wherein the selenium compound is methylselenocysteine.
4. The method of claim 1, wherein the selenium compound is administered at a time selected from the group consisting of prior to administration of the anticancer agent, during administration of the anticancer agent, following administration of the anticancer agent and a combination thereof.
5. The method of claim 1, wherein the toxicity is alopecia.
6. The method of claim 1, wherein the toxicity is bladder toxicity.
7. The method of claim 1, wherein the selenium is administered at a dose of 200 μ g/person to 800 μ g/person.
8. A method for using cyclophosphamide at a higher than therapeutic dose comprising the steps of administering to an individual in need of treatment a higher than therapeutic dose of cyclophosphamide and a selenium compound, wherein the

toxicity of cyclophosphamide is reduced with the administration of the selenium compound.

9. The method of claim 8, wherein the selenium compound is seleno-L-methionine.
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10. The method of claim 8, wherein the selenium compound is methylselenocysteine.

10 11. The method of claim 8, wherein the selenium compound is administered at a time selected from the group consisting of prior to administration of cyclophosphamide, during administration of the anticancer agent, following administration of cyclophosphamide and a combination thereof.

15 12. The method of claim 8, wherein the toxicity is alopecia.

13. The method of claim 8, wherein the toxicity is bladder toxicity.

14. The method of claim 8, wherein the selenium is administered at a dose of
20 200 μ g/person to 3.6 mg/person.

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